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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/746,352	12/21/2000	Jingdong Lin	J. LIN 3	1689

27964   7590   08/25/2004

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EXAMINER
WANG, TED M

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 June 2004*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 4-8, 11-15, 18-22, and 25-28* is/are rejected.

7)☒ Claim(s) *2,3,9,10,16,17,23 and 24* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-28 are pending in the application.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed
> or described as set forth in section 102 of this title, if the differences between the
> subject matter sought to be patented and the prior art are such that the subject
> matter as a whole would have been obvious at the time the invention was made
> to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was
> made.

3.   Claims 1, 4-8, 11-15, 18-22, and 25-28 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lin et al. (PT6,553,063) in view of Hansen (US2002/0097791).

    ❏   In regard claim 1, Lin et al. discloses a constellation-multiplexed transmitter and

           receiver with an assorter configured to receive a signal having disparate

           transmission characteristic (Fig.2 and 4, and column 8 line 55 – column 9 line13)

           and process the applied input signal (data, voice, or cellular radio) to an encoder;

           and a translator, coupled to said assorter, configured to encode the applied input

           signal (data, voice, or cellular radio) into a symbol representation as a function of

           a transmission characteristic associated therewith (Fig.2 elements 16 and 17 and

           Fig.4 elements 45-48 and column 6 lines 13-67) except specifically teaching that

           an assorter could be configured to receive first and second signals having

           disparate transmission characteristics and select one of first and second signals.

Hansen discloses a constellation mapping and bit loading in multi-carrier transceivers that could receive first and second signals having disparate transmission characteristics (Fig.1 elements 16, 22, 24, 26, 18, 28, 30, and 32, and paragraphs 15, 26, and 28) and select one of said first and second signals (Fig.2 elements 50-64, paragraphs 26, 28, and 35-38) in order to perform for each of the different information types (voice, video, and data, etc), such that transmission carriers are selected for optimal bit rates and error rates.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lin's constellation-multiplexed transmitter in view of Hansen's disclosure in order to perform for each of the different information types (voice, video, and data, etc), such that transmission carriers are selected for optimal bit rates and error rates.

☐ In regard claim 4, all limitation can further be taught by Hansen in Fig.1 elements 16, 22, 24, 26, 18, 28, 30, and 32, and paragraphs 15, 26, and 28.

☐ In regard claim 5, the limitation that the system is embodied in at least one of a transmitter and a receiver associated with a telecommunications network associated with said communications channel can further be taught by Lin et al. in Fig.6 and claim10.

☐ In regard claim 6, the limitation that the system is at least partially embodied in a sequence of operating instructions operable on a processor can further be taught by Lin et al. in column 8 lines 55-66.

□ In regard claim 7, the limitation that communications channel has a frequency dependent channel capacity and said first and second signals have different bit error rate transmission characteristics, said translator configured to encode said selected one of said first and second signals into said symbol representation as a function of said bit error rate transmission characteristics and said channel capacity can further be taught by Lin et al. in column 3 lines 41-65.

□ In regard claim 8, which is a method claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.

□ In regard claim 11, which is a method claim related to claim 4, all limitation is contained in claim 4. The explanation of all the limitation is already addressed in the above paragraph.

□ In regard claim 12, which is a method claim related to claim 5, all limitation is contained in claim 5. The explanation of all the limitation is already addressed in the above paragraph.

□ In regard claim 13, which is a method claim related to claim 6, all limitation is contained in claim 6. The explanation of all the limitation is already addressed in the above paragraph.

□ In regard claim 14, which is a method claim related to claim 7, all limitation is contained in claim 7. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 15, which is a means function claim related to claim 1, all limitation is contained in claim 1. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 18, which is a means function claim related to claim 4, all limitation is contained in claim 4. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 19, which is a means function claim related to claim 5, all limitation is contained in claim 5. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 20, which is a means function claim related to claim 6, all limitation is contained in claim 6. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 21, which is a means function claim related to claim 7, all limitation is contained in claim 7. The explanation of all the limitation is already addressed in the above paragraph.

- In regard claim 22, which is a transmitter claim related to claim 1, the limitation of a bit merge and framer subsystem can further be taught by Hansen in Fig.1 elements 24, 30, and 36; and

  a bit-to-symbol mapping subsystem coupled to the bit merge and framer subsystem can further be taught by Hansen in Fig.1 element 40.

  All other limitation is contained in claim 1. The explanation of the limitation is already addressed in the above paragraph.

❏ In regard claim 25, which is a means function claim related to claim 4, all

limitation is contained in claim 4. The explanation of all the limitation is already

addressed in the above paragraph.

❏ In regard claim 26, which is a means function claim related to claim 5, all

limitation is contained in claim 5. The explanation of all the limitation is already

addressed in the above paragraph.

❏ In regard claim 27, which is a means function claim related to claim 6, all

limitation is contained in claim 6. The explanation of all the limitation is already

addressed in the above paragraph.

❏ In regard claim 28, which is a means function claim related to claim 7, all

limitation is contained in claim 7. The explanation of all the limitation is already

addressed in the above paragraph.

Allowable Subject Matter

4.   Claims 2, 3, 9, 10, 16, 17, 23, and 24 would be allowable if rewritten to overcome

the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action

and to include all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ted M Wang whose telephone number is (703) 305-

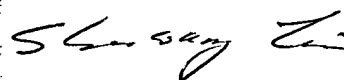0373. The examiner can normally be reached on 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Steven Chin can be reached on (703) 305-4714. The fax phone number for

the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 306-

0377.

Ted M Wang
Examiner
Art Unit 2634

Ted M. Wang

SHUWANG LIU
PRIMARY EXAMINER